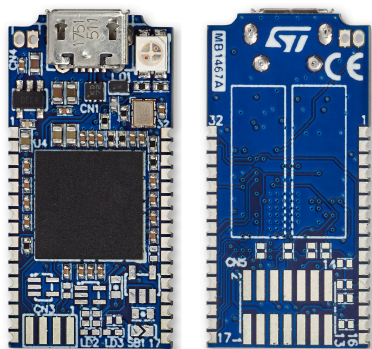


STLINK-V3MODS mini debugger and programmer for STM32 microcontrollers



STLINK-V3MODS top and bottom views. Pictures are not contractual.

Product status link

[STLINK-V3MODS](#)

Features

- Modular probe with small size: approximately 15 × 30 mm
- Direct-to-PCB implementation by 2 × 16-pin 1.27 mm edge castellated vias, with all signals available in the required minimum PCB surface
- Self-powered through a USB Micro-B connector
- USB 2.0 high-speed compatible interface
- 5 V source output capability up to 200 mA
- JTAG/SWD (Serial Wire Debug) specific features:
 - 3.0 to 3.6 V application voltage support and 5 V tolerant inputs
 - JTAG communication support
 - SWD and SWV (Serial Wire Viewer)
- Virtual COM port (VCP) specific features:
 - 3.0 to 3.6 V application voltage support on the UART interface and 5 V tolerant inputs
 - VCP frequency up to 15 MHz
- Multipath bridge USB to SPI/UART/I²C/CAN/GPIOs specific features:
 - 3.0 to 3.6 V application voltage support and 5 V tolerant inputs
- Drag-and-drop flash programming
- Two color LEDs: communication and power

Description

STLINK-V3MODS is a small-size debugging and programming probe for STM32 microcontrollers.

The JTAG/SWD interfaces are used to communicate with any STM32 microcontroller located on an application board.

STLINK-V3MODS also provides a Virtual COM port interface enabling the host PC to communicate with the target microcontroller through one UART, and bridge interfaces (SPI, I²C, CAN, and GPIOs) simplifying, for instance, the field programming through the bootloader.

STLINK-V3MODS is ready to be embedded in a controller application and can be directly soldered on the PCB motherboard.

1 Ordering information

To order STLINK-V3MODS, refer to [Table 1](#). For a detailed description of the product, refer to its user manual.

Table 1. Ordering information

Order code	User manual	Description
STLINK-V3MODS	UM2502	STLINK-V3 modular in-circuit debugger and programmer for STM32 microcontrollers

1.1 Product marking

The stickers located on the top or bottom side of all PCBs provide product information:

- First sticker: product order code and product identification, generally placed on the main board featuring the target device.
Example:

Product order code Product identification
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- Second sticker: board reference with revision and serial number, available on each PCB.
Example:

MBxxxx-Variant-yyz syywwxxxxx	
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On the first sticker, the first line provides the product order code, and the second line the product identification.

On the second sticker, the first line has the following format: “MBxxxx-Variant-yyz”, where “MBxxxx” is the board reference, “Variant” (optional) identifies the mounting variant when several exist, “y” is the PCB revision, and “zz” is the assembly revision, for example B01. The second line shows the board serial number used for traceability.

Parts marked as “ES” or “E” are not yet qualified and therefore not approved for use in production. ST is not responsible for any consequences resulting from such use. In no event will ST be liable for the customer using any of these engineering samples in production. ST’s Quality department must be contacted prior to any decision to use these engineering samples to run a qualification activity.

“ES” or “E” marking examples of location:

- On the targeted STM32 that is soldered on the board (for an illustration of STM32 marking, refer to the STM32 datasheet *Package information* paragraph at the www.st.com website).
- Next to the evaluation tool ordering part number that is stuck, or silk-screen printed on the board.

Some boards feature a specific STM32 device version, which allows the operation of any bundled commercial stack/library available. This STM32 device shows a “U” marking option at the end of the standard part number and is not available for sales.

To use the same commercial stack in their applications, the developers might need to purchase a part number specific to this stack/library. The price of those part numbers includes the stack/library royalties.

2 Development environment

STLINK-V3MODS embeds an STM32 32-bit microcontroller based on the Arm® Cortex®-M core.

Note: Arm is a registered trademark of Arm Limited (or its subsidiaries) in the US and/or elsewhere.



2.1 System requirements

- Multi-OS support: Windows® 10, Windows® 11, Linux® 64-bit, or macOS®
- USB Type-A or USB Type-C® to Micro-B cable

Note: macOS® is a trademark of Apple Inc., registered in the U.S. and other countries and regions.

Linux® is a registered trademark of Linus Torvalds.

Windows is a trademark of the Microsoft group of companies.

2.2 Development toolchains

- IAR Systems® - IAR Embedded Workbench®⁽¹⁾
- Keil® - MDK-ARM⁽¹⁾
- GCC-based IDEs

1. On Windows® only.

Revision history

Table 2. Document revision history

Date	Revision	Changes
20-Dec-2018	1	Initial release.
08-Dec-2023	2	Updated Features .

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